

CLAIMS

1. Pseudo-isothermal chemical reactor (1), comprising a plurality of boxed, plate-shaped heat exchangers (7) with a substantially flattened rectangular shape, formed from a pair of juxtaposed metallic plates (8, 8a), spaced apart and joined perimetrically, defining an inner chamber (9) intended to be crossed, along a predetermined direction, by a heat exchange operating fluid, characterized in that said heat exchangers (7) comprise spacer elements (12) placed between said metallic plates (8, 8a) inside said chamber (9).
2. Chemical reactor according to claim 1, characterized in that said spacer elements (12) comprise a metallic network, stretched metallic plate, a grill or else a plate with fret or concertina profile with parallel folds.
3. Chemical reactor according to claim 1, characterized in that said spacer elements (12) are structurally independent from said exchangers (7).
4. Chemical reactor according to claim 1, characterized in that said spacer elements (12) are welded to the plates (8, 8a) of said heat exchangers (7) at predetermined welding points (100).
5. Chemical reactor according to claim 1, characterized in that said welding points (100) are arranged with a quincunx pattern.
6. Boxed, plate-shaped heat exchanger (7) with a substantially flattened rectangular shape, formed from a pair of juxtaposed metallic plates (8, 8a), spaced apart and joined perimetrically, defining an inner chamber (9)

intended to be crossed, along a predetermined direction, by a heat exchange operating fluid, characterized in that said heat exchanger (7) comprises a spacer element (12) placed between said metallic plates (8, 8a) inside said chamber
5 (9).

7. Heat exchanger (7) according to claim 6, characterized in that said spacer element (12) comprises a metallic network, stretched metallic plate, a grill or else a plate with fret or concertina profile with parallel folds.

10 8. Heat exchanger (7) according to claim 6, characterized in that said spacer element (12) is structurally independent from said heat exchanger (7).

9. Heat exchanger (7) according to claim 6, characterized in that said spacer element (12) is welded to the plates
15 (8, 8a) of said heat exchanger (7) at predetermined welding points (100).

10. Heat exchanger (7) according to claim 9, characterized in that said welding points (100) are arranged with a quincunx pattern.